

Patent Claims

1. Valve for a water faucet, with

1.1 a main water channel (18), which can be shut off, comprising a water inflow (17) and a water outflow (19),

5 1.2 an at least partially elastic diaphragm (20) whose surface serves for shutting off and turning on the main water channel (18),

1.3 a pilot water channel (27, 28, 30, 31), which leads to the other surface of the diaphragm (20) and which is connectable with the water inbranch (17) as well as also with the water outbranch (19) of the main water channel (10), and

10 1.4 a movable closure element (22, 24, 25, 26) which can be moved back and forth between a first and a second position,

characterized in

that the movable closure element (22, 24, 25, 26) can be moved linearly by means of magnetostatic forces and the movable closure element (22, 24, 25, 26) has two closure parts (25, 15 26; 119, 120), of which the first closure part (25; 119) in a first position of the closure element (22, 24, 25, 26) closes the pilot channel (27, 28) on the side of the water inbranch, while the second closure part (26; 120) opens the pilot channel (30, 31) on the side of the water outbranch, and

that in a second position of the closure element (22, 24, 25, 26) the first closure part (25) opens 20 the pilot channel (27, 28) on the side of the water inbranch, while the second closure part (26) closes the pilot channel (30, 31) on the side of the water outbranch.

2. Valve as claimed in claim 1, characterized in that the closure elements (25, 26; 119, 120) are disposed on opposite ends of a movable arrangement (22, 24).

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3. Valve as claimed in claim 2, characterized in that the movable arrangement (22, 24) comprises a permanent magnet (22).

4. Valve as claimed in claim 1, characterized in that a spring (33) is compressible by means 30 of a foot-operated Bowden cable (11) and a support part (32), this support part supporting a permanent magnet (23).

5. Valve as claimed in claims 3 and 4, characterized in that the permanent magnets (22, 23) are spaced apart from one another and are magnetically coupled.

6. Valve as claimed in claim 1, characterized in that the main water channel is comprised of a first region which includes a portion (17) extending in a first direction and a second portion (18) extending perpendicularly to it, as well as a second region comprising a portion (19) which extends in the same direction as the first portion (17).

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7. Valve as claimed in claims 1 and 6, characterized in that when the valve (6) is closed the elastic diaphragm (20) rests with its underside on the second portion (18) of the first region.

8. Valve as claimed in claim 7, characterized in that the water discharge area of the second
10 portion is smaller than the area of the upper side of the elastic diaphragm (20).

9. Valve as claimed in claim 4, characterized in that the support part (32) which can compress the first spring (33) is movable by means of an arrangement (35) which has a reception (51) for a second spring (50).

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10. Valve as claimed in claim 9, characterized in that the first spring (33) is softer than the second spring (50).

11. Valve as claimed in claim 9, characterized in that the reception for the second spring (50)
20 is provided with at least one slot in one wall, with a cable (63) being guided through the slot, about which the spring (50) is wound.

12. Valve as claimed in claim 1, characterized in that the water inbranch (17) and the water
outbranch (19) are provided in a common plane.

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13. Valve as claimed in claim 1, characterized in that the magnetostatic forces are generated by a magnet (23) which is linearly movable by means of a control device (111).

14. Valve as claimed in claim 13, characterized in that in the plane of the linearly movable
30 magnet (23) a coil spring (78) is provided, through the interior of which extends a wire (74).

15. Valve as claimed in claim 14, characterized in that the end of the wire (74) is directly or indirectly connected with the magnet (23).